

electrically connected to an electrode of a circuit board with a bump formed on the electrode of the electronic component and bonded to the electrode of the circuit board in a state in which the bump is crushed with interposition
5 of an anisotropic conductive layer, in which an insulating resin is mixed with an inorganic filler and hardened, and

the anisotropic conductive layer comprises: a first resin layer, which is positioned in a portion brought in contact with either the electronic component or the
10 board and in which an insulating resin identical to the insulating resin is mixed with the inorganic filler; and a second resin layer, which is in contact with the first resin layer and is made of an insulating resin whose amount of the inorganic filler is less than that of the first
15 resin layer.

According to a 20th aspect of the present invention, there is provided an electronic component mounting method as defined in any one of the first through
20 ninth and 14th through 17th aspects, wherein the bump is a bump formed by plating or printing.

According to a 21st aspect of the present invention, there is provided an electronic component unit as defined in any one of the 18th through 19th aspects, wherein the bump is a bump formed by plating or printing.

25 According to a 22nd aspect of the present

invention, there is provided an electronic component mounting method as defined in any one of the first through ninth, 14th through 17th, and 20th aspects, wherein the anisotropic conductive layer is provided by mixing the solid insulating resin mixed with the inorganic filler with a conductive particle that has a mean diameter greater than a mean particle diameter of the inorganic filler.

According to a 23rd aspect of the present invention, there is provided an electronic component mounting apparatus as defined in any one of the 10th through 12th aspects, wherein the anisotropic conductive layer is provided by mixing the solid insulating resin mixed with the inorganic filler with a conductive particle that has a mean diameter greater than a mean particle diameter of the inorganic filler.

According to a 24th aspect of the present invention, there is provided an electronic component unit as defined in any one of the 18th through 19th and 21st aspects, wherein the anisotropic conductive layer is provided by mixing the solid insulating resin mixed with the inorganic filler with a conductive particle that has a mean diameter greater than a mean particle diameter of the inorganic filler.

According to a 25th aspect of the present invention, there is provided an electronic component

mounting method comprising:

forming a ball at a tip of a metal wire by an electric spark similarly to wire bonding and forming a bump by thermocompression-bonding the formed ball to an electrode of an electronic component with supersonic waves by means of a capillary;

mounting the electronic component on a circuit board while aligning in position the electrode of the electronic component with an electrode of the board with interposition of a solid or semi-solid insulating resin layer in which an insulating resin is mixed with an inorganic filler without leveling the formed bump; and

subsequently bonding the electronic component to the circuit board by hardening the insulating resin layer interposed between the electronic component and the circuit board while correcting warp of the board and crushing the bump with a pressure force of not smaller than 20 gf per bump applied to the electronic component against the circuit board by means of a tool and heat applied from the electronic component side or heat applied from the board side or heat applied from both the electronic component side and the board side, so that the electrode of the electronic component is electrically connected with the electrode of electrically connected the circuit board.

According to a 26th aspect of the present